



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/731,383

12/09/2003

Ashutosh K. Jha

NVDA P000862

4536

26291 7590 01/18/2008
PATTERSON & SHERIDAN L.L.P.
595 SHREWSBURY AVE, STE 100
FIRST FLOOR
SHREWSBURY, NJ 07702

EXAMINER

LIU, LIN

ART UNIT

PAPER NUMBER

2145

MAIL DATE

DELIVERY MODE

01/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/731,383	Applicant(s) JHA ET AL.	
	Examiner LIN LIU	Art Unit 2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 32-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27, and 32-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/18/2007, 10/05/2007 and 11/15/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to communications filed on 11/09/2007.

Claims 1-27, and 32-41 are pending and have been examined.

2. The information disclosure statement (I.D.S) filed on 09/18/2007, 10/05/2007 and 11/15/2007.

Claim Objections

3. Claim 31 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Since claim 31 is cancelled, for the purpose of examination, the examiner treats this claim to depend on claim 1.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 32-35 recite the limitations "the pointer" and "the command unit".

There is insufficient antecedent basis for these limitations in the claims. For the purpose of examination, the examiner treats these limitations as "the bit" and "the command ring".

6. Claim 32 recites the limitation "wherein when the TCP stack writes the entry to the command ring". There is insufficient antecedent basis for this

Art Unit: 2145

limitation in the claim. For the purpose of examination, the examiner treats this limitation as “wherein when the *offload unit* writes the entry to the command ring”.

7. Claims 36 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has added the new claim to include the limitation: “*wherein the Command Read Pointer is not permitted to pass the Command Write Pointer*”, which is a negative limitation that rendered the claims indefinite (See MPEP 2173.05 (i) Negative Limitations section).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 1-3, 5-10, 13-25, 27, 32-38 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Pinkerton et al. (publication no.: US**

Art Unit: 2145

2006/0069792 A1) in view of **Boyd et al. (publication no.: US 2004/0049601 A1)** and **Lanteigne et al. (Patent no.: US 6,757,756 B1).**

With respect to **claim 1**, Pinkerton teaches a method of communicating between a TCP stack, wherein the TCP stack delegates one or more connections to the offload unit, and the TCP stack processes connections that are not delegated or require special processing, and an offload unit, comprising:

Art Unit: 2145

utilizing a driver as a translator for writing a command including an index corresponding to a delegated connection to an entry in a command linked list (Pinkerton, page 4, paragraphs 40 and 41, noted that the intermediate layer 206 receives and passes the command to the peripheral device 204, wherein the command includes the index of the connection states, CONST, CAHCED and DELEGATED, where the peripheral device 204 has a linked list in storing the parameter information. Noted that the linked list is a type of data structure as applicant's definition of Ring is in the specification);

indicating an ownership of the entries in the command linked list (Pinkerton: page 4, paragraph 41, and page 7, paragraph 60, noted that the maintenance of ownership of the connection state in the linked list);

reading the command from the entry in the command linked list to the offload unit (Pinkerton, page 4, paragraph 41, noted that the command is read back when the offload is terminated);

transferring an ownership of the entry in the command linked list to TCP stack (Pinkerton: page 4, paragraph 41, and page 7, paragraph 60).

executing the command (Pinkerton, page 4, paragraph 41, noted the transferring of the connection state index DELEGATED variable); and

writing command specific status to the entry in the command linked list by the offload unit (Pinkerton, page 4, paragraph 41, noted the transferring of the connection state variables, CONST, CACHED, and DELEGATED).

Art Unit: 2145

However, Pinkerton does not explicitly teach that the linked list is a circular or ring data structure, and indicating the ownership of the entries in the command linked list buffer by a pointer bit.

In an analogous art, Boyd teaches a circular linked list (Boyd, page 9, paragraph 118, noted the circular linked list) in queuing the data information.

Therefore it would have been obvious to a person with ordinary skill in the art at the time the invention was made to substitute the circular linked list as taught by Boyd with the command ring in Pinkerton's invention in order to provide an efficient and time saving benefit in moving the pointer on the list from the last index to the first index.

However, the combined method of Pinkerton and Boyd does not explicitly teach a method of indicating the ownership of the entries in a command linked list buffer by a pointer bit.

In an analogous art, Lanteigne teaches a method of indicating the ownership of the entries in a command linked list buffer by a pointer bit (Lanteigne: fig. 8, col. 3, lines 25-34, col. 6, lines 15-31, and col. 20, lines 21-40, noted the indication of the ownership in the entries of the control ring buffer by use of write and read pointers).

Therefore it would have been obvious to a person with ordinary skill in the art at the time the invention to substitute the method of indicating the ownership in the entries of a control ring buffer by the use of write and read pointers as taught by Lanteigne in the modified combined method of Pinkerton's and Boyd's

Art Unit: 2145

invention in order to handle the high frequency payload type messaging between the software applications and firmware (Lanteigne: col. 6, lines 32-43).

With respect to **claim 2**, Pinkerton teaches the method of claim 1, wherein the command includes a location of a buffer for storing payload data produced by the offload unit (Pinkerton, page 5, paragraph 43, noted that the data is stored in the buffer).

With respect to **claim 3**, Pinkerton teaches the method of claim 1, wherein the command includes connection information needed to setup a delegated connection (Pinkerton, page 7, paragraph 61, noted the DELEGATED connection state includes information such as, sequence number of the received packets).

With respect to **claim 5**, Pinkerton teaches the method of claim 1, further comprising: writing a notification descriptor including an index corresponding to a delegated connection to an entry in a notification ring (Pinkerton, page 4, paragraph 41, noted that the intermediate layer receives the command including the index of the connection states, CONST, CAHCED and DELEGATED); and reading the notification descriptor from the entry in the notification ring (Pinkerton, page 4, paragraph 41, noted that the command is read back when the offload is terminated).

With respect to **claim 6**, Pinkerton teaches the method of claim 5, wherein the notification descriptor includes one or more notification flags indicating specific information for a connection (Pinkerton, page 11, paragraph 94, noted the flag to indicate that the connection is updated).

Art Unit: 2145

With respect to **claim 7**, Pinkerton teaches a method of communicating between a TCP stack and an offload unit, wherein the TCP stack delegates one or more connections to the offload unit, the TCP stack processing connections that are not delegated or require special processing comprising:

writing a notification descriptor to an entry in a notification linked list by the offload unit (Pinkerton, page 4, paragraphs 40 and 41, noted that the intermediate layer 206 receives and passes the command to the peripheral device 204 in notifying the peripheral device the state of the connection, wherein the command includes the index of the connection states, CONST, CAHCED and DELEGATED, where the peripheral device 204 has a linked list in storing the parameter information. Noted that the linked list is a type of data structure as applicant's definition of Ring is in the specification);

indicating an ownership of the entry in the linked list (Pinkerton: page 4, paragraph 41, and page 7, paragraph 60, noted that the maintenance of ownership of the connection state in the linked list);

utilizing a driver as a translator for reading the notification descriptor from the entry in the notification linked list (Pinkerton, page 4, paragraph 41, noted that the command is read back when the offload is terminated);

reading the notification descriptor from the entry in the notification linked list to the TCP stack based on the ownership of the entry (Pinkerton: page 4, paragraph 41, and page 7, paragraph 60);

determining connection information for a delegated connection based on the notification descriptor (Pinkerton, page 11, paragraph 91).

However, Pinkerton does not explicitly teach that the linked list is a circular or ring data structure, and indicating the ownership of the entries in the notification linked list buffer by a pointer bit.

In an analogous art, Boyd teaches a circular linked list (Boyd, page 9, paragraph 118, noted the circular linked list) in queuing the data information.

Therefore it would have been obvious to a person with ordinary skill in the art at the time the invention was made to substitute the circular linked list as taught by Boyd with the command ring in Pinkerton's invention in order to provide an efficient and time saving benefit in moving the pointer on the list from the last index to the first index.

However, the combined method of Pinkerton and Boyd does not explicitly teach a method of indicating the ownership of the entries in a command linked list buffer by a pointer bit.

In an analogous art, Lanteigne teaches a method of indicating the ownership of the entries in a command linked list buffer by a pointer bit (Lanteigne: fig. 8, col. 3, lines 25-34, col. 6, lines 15-31, and col. 20, lines 21-40, noted the indication of the ownership in the entries of the control ring buffer by use of write and read pointers).

Therefore it would have been obvious to a person with ordinary skill in the art at the time the invention to substitute the method of indicating the ownership in the entries of a control ring buffer by the use of write and read pointers as taught by Lanteigne in the modified combined method of Pinkerton's and Boyd's

Art Unit: 2145

invention in order to handle the high frequency payload type messaging between the software applications and firmware (Lanteigne: col. 6, lines 32-43).

With respect to **claim 8**, Pinkerton teaches the method of claim 7, wherein the notification descriptor includes an index corresponding to the delegated connection (Pinkerton, page 4, paragraph 41, noted that the command including the index of the connection states, CONST, CAHCED and DELEGATED).

Regarding **claim 9**, the limitations of this claim are substantially the same as those in claim 6. Therefore the same rationale for rejecting claim 6 is used to reject claim 9. By this rationale **claim 9** is rejected.

With respect to **claim 10**, the method of claim 7, wherein the notification descriptor includes a count of received acknowledgements (It is inherent for TCP protocol to have this feature).

With respect to **claim 13**, Pinkerton teaches the method of claim 8, wherein a flag indicates a sequence number threshold was reached on the delegated connection (Pinkerton, page 7, paragraph 61, noted the sequence number).

With respect to **claim 14**, Pinkerton teaches the method of claim 8, wherein a flag indicates at least a portion of frame data received on the delegated connection was uploaded by the offload unit to a legacy buffer (Pinkerton, page 5, paragraph 44).

With respect to **claim 15**, Pinkerton teaches the method of claim 8, wherein a flag indicates a request for a user buffer for uploading of payload data from the offload unit (Pinkerton, page 5, paragraph 44).

Art Unit: 2145

Regarding **claim 16**, the limitations of this claim are substantially the same as those in claim 7. Therefore the same rationale for rejecting claim 7 is used to reject claim 16. By this rationale **claim 16** is rejected.

Regarding **claim 17**, the limitations of this claim are substantially the same as those in claim 3. Therefore the same rationale for rejecting claim 3 is used to reject claim 17. By this rationale **claim 17** is rejected.

With respect to **claim 18**, Pinkerton teaches the system of claim 16, wherein the offload unit is configured to write command specific status to the command ring (Pinkerton, page 4, paragraph 41, noted the transferring of the connection state variables, CONST, CACHED, and DELEGATED).

With respect to **claim 19**, Pinkerton teaches the system of claim 16, further comprising a transmit descriptor ring configured to transfer transmit buffer information from the TCP stack to the offload unit (Pinkerton, page 6, paragraph 57).

With respect to **claim 20**, Pinkerton teaches the system of claim 19, wherein the transmit buffer information includes a delegated connection index (Pinkerton, page 4, paragraph 41, noted that the intermediate layer receives the command including the index of the connection states, CONST, CAHCED and DELEGATED).

With respect to **claim 21**, Pinkerton teaches the system of claim 16, further comprising a receive descriptor ring configured to transfer receive buffer information from the TCP stack to the offload unit (Pinkerton, page 6, paragraph 57).

Regarding **claim 22**, the limitations of this claim are substantially the same as those in claim 7. Therefore the same rationale for rejecting claim 7 is used to reject claim 22. By this rationale **claim 22** is rejected.

Regarding **claim 23**, the limitations of this claim are substantially the same as those in claim 6. Therefore the same rationale for rejecting claim 6 is used to reject claim 23. By this rationale **claim 23** is rejected.

Regarding **claim 24**, the limitations of this claim are substantially the same as those in claim 14. Therefore the same rationale for rejecting claim 14 is used to reject claim 24. By this rationale **claim 14** is rejected.

Regarding **claim 25**, the limitations of this claim are substantially the same as those in claim 13. Therefore the same rationale for rejecting claim 13 is used to reject claim 25. By this rationale **claim 25** is rejected.

Regarding **claim 27**, the limitations of this claim are substantially the same as those in claim 10. Therefore the same rationale for rejecting claim 10 is used to reject claim 27. By this rationale **claim 27** is rejected.

With respect to **claim 32**, Pinkerton teaches a method as claimed in claim 1, wherein when the offload unit writes the entry to the command ring, the ownership of the entry is set to indicate that the entry is owned by the offload unit (Pinkerton: page 4, paragraph 41).

However, Pinkerton does not explicitly teach a method of indicating the ownership of an entry to a command linked list buffer by a write pointer.

In an analogous art, Lanteigne teaches a method of indicating the ownership of the entries in a command linked list buffer by a write pointer bit

Art Unit: 2145

(Lanteigne: fig. 8, col. 3, lines 25-34, col. 6, lines 15-31, and col. 20, lines 21-40, noted the indication of the ownership in the entries of the control ring buffer by use of write and read pointers). The same motivation used in claim applies equally as well to claim 32.

With respect to **claim 33**, Pinkerton teaches a method as claimed in claim 1, wherein when the offload unit writes the entry to the command ring, the ownership of the entry is set to indicate that the entry is owned by the TCP stack (Pinkerton: page 4, paragraph 41, and page 7, paragraph 60).

However, Pinkerton does not explicitly teach a method of indicating the ownership of an entry to a command linked list buffer by a read pointer.

In an analogous art, Lanteigne teaches a method of indicating the ownership of the entries in a command linked list buffer by a read pointer bit (Lanteigne: fig. 8, col. 3, lines 25-34, col. 6, lines 15-31, and col. 20, lines 21-40, noted the indication of the ownership in the entries of the control ring buffer by use of write and read pointers). The same motivation used in claim applies equally as well to claim 33.

Regarding **claim 34**, the limitations of this claim are substantially the same as those in claim 33. Therefore the same rationale for rejecting claim 33 is used to reject claim 34. By this rationale **claim 34** is rejected.

With respect to **claim 35**, Pinkerton teaches a method as claim in claim 1, wherein at startup the ownership of the entries owned by the TCP stack (Pinkerton: page 4, paragraphs 40-41).

However, Pinkerton does not explicitly teach a method of indicating the ownership of an entry to a command linked list buffer by a pointer.

In an analogous art, Lanteigne teaches a method of indicating the ownership of the entries in a command linked list buffer by a read pointer bit (Lanteigne: fig. 8, col. 3, lines 25-34, col. 6, lines 15-31, and col. 20, lines 21-40, noted the indication of the ownership in the entries of the control ring buffer by use of write and read pointers). The same motivation used in claim applies equally as well to claim 35.

With respect to **claim 36**, Pinkerton teaches all the claimed limitations except that he does not explicitly teach a method of indicating an ownership to an entry of a command linked list buffer by a Command Read Pointer and a Command Write Pointer.

However, Pinkerton does not explicitly teach a method of indicating the ownership of an entry to a command linked list buffer by a pointer.

In an analogous art, Lanteigne teaches a method of indicating the ownership of the entries in a command linked list buffer by a read pointer bit (Lanteigne: fig. 8, col. 3, lines 25-34, col. 6, lines 15-31, and col. 20, lines 21-40, noted the indication of the ownership in the entries of the control ring buffer by use of write and read pointers). The same motivation used in claim applies equally as well to claim 36.

With respect to **claim 37**, Pinkerton teaches a method as claims in claim 36, including the step of the offload unit using the ring to notify the TCP stack of

Art Unit: 2145

offloaded connections needing further processing by the TCP stack (Pinkerton: page 7, paragraph 60, and page 11, paragraph 88).

With respect to **claim 38**, Pinkerton teaches the system of claim 22, wherein the offload unit is configured to process the commands for the one or more connections that are delegated to the offload unit and set the ownership in any entries in the command ring that are read by the offload unit (Pinkerton: page 4, paragraph 41, and page 7, paragraph 60).

However, Pinkerton does not explicitly teach a method of indicating the ownership of an entry to a command linked list buffer by a pointer.

In an analogous art, Lanteigne teaches a method of indicating the ownership of the entries in a command linked list buffer by a read pointer bit (Lanteigne: fig. 8, col. 3, lines 25-34, col. 6, lines 15-31, and col. 20, lines 21-40, noted the indication of the ownership in the entries of the control ring buffer by use of write and read pointers). The same motivation used in claim applies equally as well to claim 38.

With respect to **claim 40**, Pinkerton teaches the method of claim 5, further comprising setting the ownership in the entry in the notification ring by the offload unit indicating that the entry is owned by the TCP stack when the notification descriptor is written (Pinkerton: page 4, paragraph 41, and page 7, paragraph 60).

However, Pinkerton does not explicitly teach a method of indicating the ownership of an entry to a command linked list buffer by a pointer.

Art Unit: 2145

In an analogous art, Lanteigne teaches a method of indicating the ownership of the entries in a command linked list buffer by a read pointer bit (Lanteigne: fig. 8, col. 3, lines 25-34, col. 6, lines 15-31, and col. 20, lines 21-40, noted the indication of the ownership in the entries of the control ring buffer by use of write and read pointers). The same motivation used in claim applies equally as well to claim 40.

11. Claims 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Pinkerton et al. (publication no.: US 2006/0069792 A1)** in view of **Boyd et al. (publication no.: US 2004/0049601 A1)** and **Lanteigne et al. (Patent no.: US 6,757,756 B1)** and further in view of **Boucher et al. (Patent no.: US 6,436,620 B1)**.

With respect to **claim 4**, the combined system of Pinkerton, Boyd and Lanteigne teaches all the claimed limitations, except that they do not explicitly teach a value representing a number of buffers accepted by the offload unit.

In the same field of endeavor, Boucher teaches a value representing a number of buffers accepted by the offload unit (Boucher, col. 13, lines 8-26, noted the number of buffers in the block).

Therefore it would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate the method of indicating the number of buffers in the block as taught by Boucher in the combined system of Pinkerton, Boyd and Lanteigne invention in order to calculate the threshold of the packets that the system can handle and reduce the traffic.

12. Claims 11, 12 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Pinkerton et al. (publication no.: US 2006/0069792 A1)** in view of **Boyd et al. (publication no.: US 2004/0049601 A1)** and **Lanteigne et al. (Patent no.: US 6,757,756 B1)** and further in view of **Meyer et al. (Publication no.: US 2002/0145976 A1)**.

With respect to **claim 11**, a combined system of Pinkerton, Boyd and Lanteigne teaches all the claimed limitations, except that they do not explicitly teach a flag indicates an acknowledgement threshold was reached on the delegated connection.

In the same field of endeavor, Meyer teaches a flag indicates an acknowledgement threshold was reached on the delegated connection (Meyer, page 3, paragraph 39, noted the duplicate acknowledgement threshold).

Therefore it would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate the flag of the duplicate acknowledgement threshold as taught by Meyer in the combined system of Pinkerton's, Boyd's and Lanteigne's invention in order to indicate the time for a given segment for which duplicate acknowledgement are being received is assumed to have been lost (Meyer, page 3, paragraph 39).

Regarding **claim 12**, the limitations of this claim are substantially the same as those in claim 11. Therefore the same rationale for rejecting claim 11 is used to reject claim 12. By this rationale **claim 12** is rejected.

Art Unit: 2145

Regarding **claim 26**, the limitations of this claim are substantially the same as those in claim 11. Therefore the same rationale for rejecting claim 11 is used to reject claim 26. By this rationale **claim 26** is rejected.

13. Claims 39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Pinkerton et al. (publication no.: US 2006/0069792 A1)** in view of **Boyd et al. (publication no.: US 2004/0049601 A1)** and **Lanteigne et al. (Patent no.: US 6,757,756 B1)** and further in view of **Boucher et al. (Patent no.: US 6,965,941 B2)**.

With respect to **claim 41**, the combined method of Pinkerton, Boyd, and Lanteigne teaches all the claimed limitations, except that they do not explicitly teach a method setting a synchronization request flag in the notification descriptor; and flushing unused user buffer descriptors queued in the offload unit for the delegated connection, wherein the unused buffer descriptors specify locations of buffers for storing payload data produced by the offload unit.

In an analogous art, Boucher teaches a method setting a synchronization request flag in the notification descriptor (Boucher: col. 27, lines 23-49, noted the synchronization pointer); and flushing unused user buffer descriptors queued in the offload unit for the delegated connection, wherein the unused buffer descriptors specify locations of buffers for storing payload data produced by the offload unit (Boucher: col. 32, lines 34-48).

Therefore it would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate the method of using a

Art Unit: 2145

synchronization pointer and flushing the unused buffer as taught by Boucher in the combined method of Pinkerton's, Boyd's and Lanteigne's invention in order to maintain the packet processing and determine the availability of data in buffer (Boucher: col. 27, lines 44-49).

Regarding **claim 39**, the limitations of this claim are substantially the same as those in claim 41. Therefore the same rationale for rejecting claim 41 is used to reject claim 39. By this rationale **claim 39** is rejected.

Response to Arguments

14. Applicant's arguments with respect to claims 1-27, and 32-41 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

Art Unit: 2145

calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Liu whose telephone number is (571) 270-1447. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm, EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. L./
/Lin Liu/
Examiner, Art Unit 2145

/Jason D Cardone/
Supervisory Patent Examiner, Art Unit 2145